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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,545	11/15/2001	Bruno Deltour	216112US2	7361
22850	7590	07/01/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DEAN, RAYMOND S	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/987,545	<b>Applicant(s)</b> DELTOUR ET AL.	
	<b>Examiner</b> Raymond S Dean	<b>Art Unit</b> 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 3 and 5 - 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 5 - 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Examiner agrees with Applicants' assertion on page 5, 3<sup>rd</sup> Paragraph of the Remarks "no matter how the prior art references are combined ...".

Examiner respectfully disagrees with Applicants assertion that the cited references don not teach time-multiplexing a data information sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots along with providing at least one general services and synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with members of the first and second group. Kroon, as mentioned in the Office Action dated April 7, 2005, teaches a TDMA system in which digital data packets are transmitted. The digital data packets, which can be voice or data, are transmitted at a plurality of different time slots that comprise a TDMA frame. There will also be simultaneous transmission of voice and data thus enabling the creation of groups of time slots in which data is transmitted and groups of time slots in which voice is transmitted. Typical TDMA systems use voice time slot clustering and data time slot clustering thereby creating groups of voice time slots and groups of data time slots thus this is an inherent characteristic of Kroon. Kroon therefore teaches time-multiplexing a data information

sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots to form a frame. McGibney, as mentioned in the Office Action dated April 7, 2005 teaches time multiplexing of the data sub-channels with a general services and synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with the data sub-channels. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame of Kroon with the synchronization sub-channel taught by McGibney for the purpose of setting the pace of the TDMA frame for the entire network as taught by McGibney thus enabling all of the terminals in said network to be synchronized for communicating with one another.

Haartsen (US 6,393,007) teaches providing a first part of the information in each time slot as configured to provide synchronization information between stations of the network (Column 5 lines 28 – 31, Column 11 lines 10 – 36, each time slot is scanned to acquire time hop and frequency hop synchronization which means that each said time slot has section for synchronization information). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use synchronization method taught by Haartsen as an alternative means for synchronizing the terminals of Kroon in view of McGibney thereby creating a TDMA system that minimizes interference in the communication channels as taught by Haartsen.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3 and 5 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon et al. (WO 00/18041) in view of McGibney (US 6,594,273) and in further view of Haartsen (US 6,393,007).

Regarding Claim 1, Kroon teaches a method of providing sub-channels for transmitting information in a telecommunication network comprising several stations for the transmission of data and speech (Figure 2, Page 5 lines 14 – 15, Page 9 lines 1 – 3, Page 9 lines 6 - 8), wherein the method comprises normally time-multiplexing a data information sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots to form a frame (Figure 2, Figure 6, Page 9 lines 1 – 3, Page 9 lines 6 – 8, Page 13 line 6, this is a TDMA system in which digital data packets are transmitted, the digital data packets, which can be voice or data, are transmitted at a plurality of different time slots that comprise a TDMA frame, since the digital data packets can be transmitted at a plurality of different time slots and there can be simultaneous transmission of voice and data there will be instants in time when there will be groups of time slots at which data is transmitted and groups of time slots at which voice is transmitted).

Kroon does not specifically teach time-multiplexing a data information sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots along with providing at least one general services and synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with members from of the first and second groups and providing a first part of the information in each sub-channel time slot as configured to provide synchronization information between stations of the network.

McGibney teaches time multiplexing of the data sub-channels with a general services and synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with the data sub-channels (Column 4 lines 25 – 32).

Kroon and McGibney both teach a wireless TDMA network thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the synchronization sub-channel taught in McGibney in the wireless network of Kroon for the purpose of setting the pace of the TDMA frame for the entire network as taught by McGibney thus enabling all of the terminals in said network to be synchronized for communicating with one another.

Kroon in view of McGibney does not teach providing a first part of the information in each sub-channel time slot as configured to provide synchronization information between stations of the network.

Haartsen teaches providing a first part of the information in each time slot as configured to provide synchronization information between stations of the network (Column 5 lines 28 – 31, Column 11 lines 10 – 36, each time slot is scanned to acquire time hop and frequency hop synchronization which means that each said time slot has section for synchronization information).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use synchronization method taught by Haartsen as an alternative means for synchronizing the terminals of Kroon in view of McGibney thereby creating a TDMA system that minimizes interference in the communication channels as taught by Haartsen.

Regarding Claim 2, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 1. McGibney further teaches providing a link between at least two stations of the network using the general services and synchronization sub-channel; and using the link to perform tasks (Column 4 lines 50 – 58, the terminals in the network are synchronized so that said terminals can perform tasks such as communicating with one another).

Regarding Claim 3, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 2. Kroon further teaches wherein the tasks include transmitting one of a request for priority transmission formulated by a station, a warning reported by a station, a “flash” message, a request for repetition of a message, commands sent out by a master station, and information regarding reconfiguration of the network (Page 16 lines 8 – 13).

Regarding Claim 5, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 1. McGibney further teaches sending a synchronization signal from a master station of the network on the general services and synchronization sub-channel (Column 1 lines 48 – 51, Column 4 lines 55 – 58, the active terminal is the master terminal).

Regarding Claim 6, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 1. Kroon further teaches transmitting information using a sub-channel for information that would normally be transmitted on another sub-channel (Page 5 lines 12 – 13, Page 16 lines 2 – 5, the control channel can also be a data channel that can transmit the same data that is transmitted on another data channel).

Regarding Claim 7, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 1. Kroon further teaches implementing an anti-collision procedure when there are several simultaneous or almost simultaneous requests for use of the data information or speech information sub-channel (Page 9 lines 19 – 29, Page 10 lines 1 – 9).

Regarding Claim 8, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 7. Kroon further teaches wherein the anti-collision process comprises: assigning a random number to each requesting station; the station with the lowest number obtaining a right to transmit first; and other stations obtaining a right to transmit in an order corresponding to a rising order of the random numbers that have been assigned to them (Page 10 lines 20 – 26, Page 16



lines 8 – 13, the priority status of the terminals are based on their randomly chosen mini/sub slots).

Regarding Claim 9, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 7. Kroon further teaches governing the anti-collision process by a rotating rule of priority (Page 16 lines 8 – 13).

Regarding Claim 10, Kroon in view of McGibney and in further view of Haartsen teaches all of the claimed limitations recited in Claim 9. Kroon further teaches making simultaneous use of both the data information sub-channel and the speech information sub-channel by a first station, and the first station releasing the required sub-channel when another station requires use the required sub-channel (Page 9 lines 1 – 3, Page 9 lines 6 – 8, Page 13 lines 6 – 13, Page 15 lines 24 – 28, this is a TDMA system which means that there will be frames comprising time slots wherein some of said time slots will be voice time slots and some of said time slots will be data time slots thus both of the voice and data sub-channels can be used simultaneously).

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2684

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond S. Dean

June 21, 2005



NAY MAUNG

SUPERVISORY PATENT EXAMINER